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NOTES ON GEOGRAPHIC DISTRIBUTION

Reptilia, Leptotyphlopidae, *Leptotyphlops salgueiroi* Amaral, 1954: Distribution extension and geographic variation

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The genus *Leptotyphlops* Fitzinger, 1843 comprises 105 species of small and slender fossorial snakes (see McDiarmid et al. 1999; Dixon and Vaughan 2003; Passos et al. 2006; Broadley and Walach 2007; Hedges 2008) that occur in all continents with exception of Antarctica and Australia (McDiarmid et al. 1999). In South America, *Leptotyphlops* has a wide distribution range, from Venezuela to northern Argentina (McDiarmid et al. 1999). Fourteen species are found in Brazil (Bérnils 2009), but due to their secretive habits, are poorly represented in herpetological collections (Passos et al. 2005).

Amaral (1954) described *Leptotyphlops salgueiroi* (Figure 1) on the basis of a single specimen from Itá (currently Baixo Guandu), state of Espírito Santo, Brazil. Rodrigues (1997) briefly described a second individual of the species from São José do Macuco (currently São José da Vitória), state of Bahia, Brazil. Passos et al. (2005) redescribed the holotype, reported new specimens and localities, and described the hemipenis of *L. salgueiroi*. Bilate and Ribeiro (2005) reported the southernmost record of the species in the state of Rio de Janeiro.

Figure 1. *Leptotyphlops salgueiroi* (MZUFV 1397), municipality Muriaé, state of Minas Gerais, Brazil. Photo by H. C. Costa.

Herein, we report 21 new specimens of *Leptotyphlops salgueiroi* housed in the following Brazilian collections: *Museu de Zoologia João Moojen* (MZUFV), *Universidade Federal de Viçosa*, in Viçosa, Minas Gerais; *Museu Nacional* (MNRJ), *Universidade Federal do Rio de Janeiro*, in Rio de Janeiro, Rio de Janeiro; *Museu de Zoologia da Universidade de São Paulo* (MZUSP), in São Paulo, São Paulo; *Museu de Ciências Naturais* (MCN-R), *PUC-Minas*, in Belo Horizonte, Minas Gerais.

Based on this additional sample we provide new distribution map (Figure 2), morphometric and pholidosis data (Table 1) for the species. Terminology for cephalic shields, and measurements follow Passos et al. (2006). Sex was determined through a ventral incision on the base of the tail. Analysis of variance (ANOVA) using scales counts (middorsal scales and subcaudal scales) was employed in order to verify existence of sexual dimorphism. Assumptions of univariate normality and homoscedasticity were evaluated using Kolmogorov-Smirnov and Levene tests, respectively (Zar 1999). The statistic analyses were performed using STATISTICA 6.0 for Windows.

According to Passos et al. (2005; 2006), males and females of *L. salgueiroi* have, respectively, 217-226 and 230-232 middorsals, 17-23 and 18-20 subcaudals. Data from additional specimens extend the number of middorsal and subcaudal scales to 200-226 / 17-24 in males, and 217-233 / 16-20 in females. Although the number of middorsal and subcaudal scales overlap between sexes, females showed significantly higher numbers of middorsals than males ($F_{(1,20)} = 27.9$; $p < 0.01$) and males had more subcaudals than females ($F_{(1, 20)} = 25.1$; $p < 0.01$), two widespread conditions in snakes (Greene 1997). Regarding the geographic distribution of *L. salgueiroi*, our data show that this taxon has a more continental distribution than previously known (Figure 2).

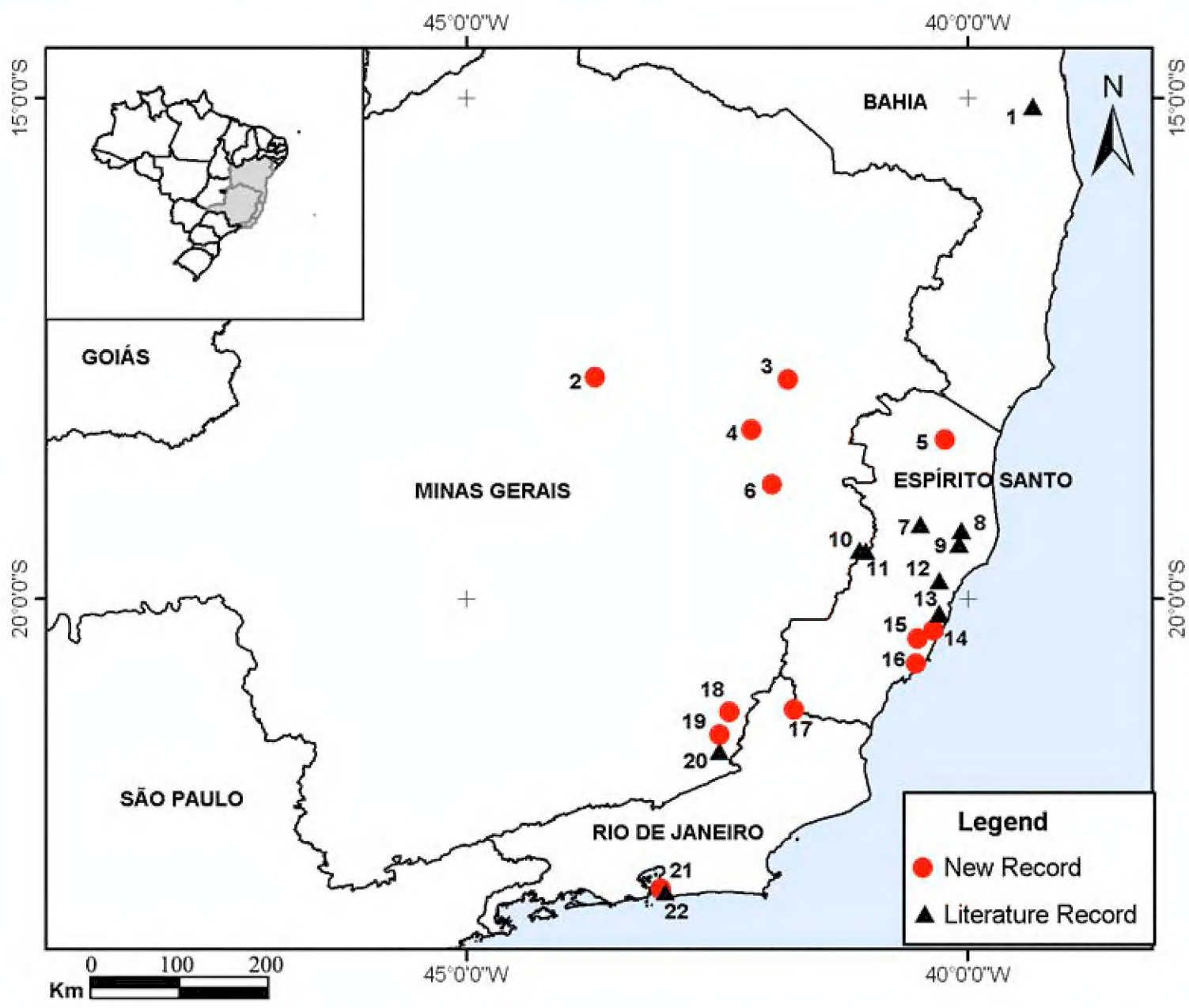

Figure 2. Geographic distribution of *Leptotyphlops salgueiroi*: 1, São José da Vitória, Bahia; 2, *Parque Nacional das Sempre Vivas*, Minas Gerais; 3, Poté, Minas Gerais; 4, São José da Safira, Minas Gerais; 5, Pinheiros, Espírito Santo; 6, Governador Valadares, Minas Gerais; 7, Governador Lidemberg, Espírito Santo; 8, Sooretama, Linhares, Espírito Santo; 9, Goytacazes, Linhares, Espírito Santo; 10, Aimorés, Minas Gerais; 11, Baixo Guandú, Espírito Santo; 12, Aracruz, Espírito Santo; 13, Campinho, Espírito Santo; 14, *Parque Estadual da Fonte Grande*, Vitória, Espírito Santo; 15, *Fazenda Campo Verde*, Viana, Espírito Santo; 16, *Vale Encantado*, Guarapari, Espírito Santo; 17, Bom Jesus de Itabapoana, Rio de Janeiro; 18, Muriaé, Minas Gerais; 19, Laranjal, Minas Gerais; 20, Recreio, Minas Gerais; 21, Cambuci, Niterói, Rio de Janeiro; 22, Itaipu, Niterói, Rio de Janeiro.

Table 1. Meristic and morphometric variation (in millimeters) of *Leptotyphlops salgueiroi*. SVL = snout-vent length, TL = tail length, MD = midbody diameter, MT = midtail diameter.

Specimens	Sex	Middorsals	Subcaudals	SVL	TAL	MB	MT
MCN-R 2561	Ä	207	22	250	28	7.1	5.8
MNRJ 13124	Ä	209	22	189	21	4.4	3.3
MNRJ 14014	Ä	208	23	126	14	3.0	2.5
MNRJ 14015	Ä	213	22	203	24	4.5	3.8
MNRJ 14245	Ä	200	21	90	9	2.5	1.7
MNRJ 14246	Ä	207	21	212	25	5.5	4.0
MNRJ 14487	Ā	221	19	275	22	6.1	4.7
MNRJ 15422	Ä	212	19	263	25	5.8	4.4
MNRJ 15825	Ā	222	19	276	22	6.5	4.9
MZUFV 1214	Ä	207	21	136	29	6.5	5.0
MZUFV 1216	Ä	206	19	215	26	4.9	3.5
MZUFV 1397	Ā	217	16	288	23	6.9	5.2
MZUFV 1519	Ä	210	20	236	25	6.6	5.2
MZUFV 1574	Ä	215	21	274	26	6.5	4.7
MZUFV 1619	Ā	226	18	296	22	7.1	5.2
MZUSP 14262	Ä	212	22	241	26	5.7	5.0
MZUSP 14263	Ā	220	19	303	26	6.7	5.2
MZUSP 15050	Ä	222	24	209	22	5.3	4.1
MZUSP 15051	Ā	233	18	274	24	5.8	4.1
MZUSP 15052	Ā	225	19	227	19	4.7	4.0
MZUSP 15053	Ä	217	23	246	29	5.2	4.0

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Appendix 1. Specimens examined

MINAS GERAIS: Laranjal (MZUFV 1619); Muriaé (MZUFV 1397, MZUFV 1519); *Parque Nacional das Sempre Vivas* (MCN-R 2561); Poté (MZUFV 1214); São José da Safira (MZUSP 14262-3); ESPÍRITO SANTO: Pinheiros (MNRJ 14014-5); *Vale Encantado*, Guarapari (MZUSP 15050-1); Governador Valadares (MZUFV 1216); *Fazenda Campo Verde*, Viana (MZUSP 15052-3); *Parque Estadual da Fonte Grande*, Vitória (MZUFV 1574); RIO DE JANEIRO: Niterói (MNRJ 14487, MNRJ 13124, MNRJ 14245-6, MNRJ 15422); Bom Jesus de Itabapoana (MNRJ 15825).